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H.B.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/092.115	06/05/98	HANRATTY	M TI-25277

MM12/0915

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EXAMINER

HAWRANEK, S

ART UNIT

PAPER NUMBER

2823

4

DATE MAILED: 09/15/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/092,115

Applicant(s)

Hanratty et al.

Examiner

Scott J. Hawranek

Group Art Unit

2823



☒ Responsive to communication(s) filed on Jun 5, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-4 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-4 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 is provisionally rejected under the judicially created doctrine of double patenting over claims 1-5 of copending Application No. 08/678,847. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: reducing photoresist layer then patterning layer under photoresist.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending

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application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auda et al (US Pat No. 5,139,904) in view of Wolf et al..

Auda et al. in figs. 1-5 and related discloses a method of patterning a first layer of a resist on a layer of gate material (fig. 2a, 17a) to define gate locations; reducing the linewidth of said patterned layer of resist (fig. 2c); using reduced linewidth patterned resist as an etch mask to form gates from said layer of a gate material (fig. 2d).

Auda et al. does not explicitly disclose forming a layer of dielectric on gates patterning a second layer of photoresist to define interconnects without a reduction in linewidth to form interconnects over gates.

However, this process is notoriously obvious as shown by Wolf et al.(pp 280). Wherein the interconnects are formed by forming a layer of dielectric on gates patterning a second layer of photoresist to define interconnects without a reduction in linewidth to form interconnects over gates. Wolf shows that this a conventional way to make contact the "outside" world. In addition,

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it is held, absent evidence to the contrary, that Auda et al. would inherently have these aspects as part of the invention in order to obtain a working device. Wherein in a working device contact to the "outside" world is required. See In re Best, 195 USPQ 428 (CCPA 1977) and In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art to use the conventional process of interconnect formation as shown by Wolf and has inherent in Auda et al. to obtain connection to the "outside" world.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Auda et al (US Pat No. 5,139,904) in view of Mishra et al.(US Pat No. 5,798,555) and Maniar et al.(US Pat No. 5,525,542).

Auda et al., discloses supra, paragraph 4 above. Auda et al. does not explicitly teach removing dummy gate; depositing gate material on dielectric and inside gate material; depositing a dielectric on gate material; patterning a second layer of photoresist on dielectric and using photoresist to form gates.

However, Mishra et al. teaches in figs. 1-17 and related text a method of forming a dummy gate structure with photoresists (fig. 2e, 48), reducing the width of dummy gate ; forming a dielectric layer over gate (fig. 2g, 66,64); removing dummy gate; a metal contact is deposited into region (fig. 68). Thereby, forming a T-Shaped gate electrode with a photoresists. It is held, absent evidence to the contrary, that T-shaped gate electrode is formed with a photoresist without a reduction as is conventional in the art. See In re Best, 195 USPQ 428 (CCPA 1977) and In re

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Fitzgerald, 205 USPQ 594 (CCPA 1980). The T-Shaped gate electrode provides a better contact with more surface area providing an improved contact as demonstrated by Mishra et al.

Examiner takes official notice that the use of anti-reflective coatings over a reflective conductive layers is notoriously obvious and is convention in the art as shown by Maniar et al.

Therefore, it would have been obvious to one of to have modified Auda et al. with Mishra et al. in order to obtain a more accurate and smaller geometry contact as taught by Auda et al. without a loss in overall performance of the gate as illustrated by Mishra et al.

#### *Examiner Comments*

Examiner notes with interest that the applicant's have cited relevant prior art application 08/678,847 now under review at the Patent Board of Appeals. However, in that application a complete IDS was provided with clearly relevant prior art to the instant application including foreign search reports. However, in the instant application no IDS was provided?

Applicant and Applicant's representative are directed to chapters 900 and 2000 of the MPEP as well as 37 CFR 10.23 and 1.56 and the following case law for further explanation of the duty of disclosure.

Monon Corp. V. Stoughton Trailer Inc. 40 USPQ2d 1625  
Environ Products Inc. V. Total Containment Inc. 43 USPQ2d 1288  
Elk Corp. Of Dallas v. GAF Building Materials Corp. 49 USPQ2d 1853  
Semiconductor Energy Laboratory Co. V. Samsung Electronics Co. 46 USPQ2d 1874

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*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott J. Hawranek whose telephone number is (703) 305-0070. The examiner can normally be reached on Monday thru Friday from 8:30 to 6:00 P.M. .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy, can be reached on (703) 308-4918. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1778.

Scott J. Hawranek  
Art Unit: 2823  
September 10, 1999

  
Chandra Chaudhari  
Primary Examiner